

Name: _____

p1105: Factoring when $a = 1$ (v1)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 - 5x + 4$

2. Factor $x^2 + 8x + 15$

3. Factor $x^2 - 14x + 45$

4. Factor $x^2 - x - 2$

5. Factor $x^2 + 13x + 36$

6. Factor $x^2 - x - 42$

7. Factor $x^2 + 6x - 16$

8. Factor $x^2 + 3x - 18$

9. Factor $x^2 + 11x + 28$

10. Factor $x^2 - 49$

11. Factor $x^2 - 6x + 5$

12. Factor $x^2 - x - 6$

13. Factor $x^2 + 13x + 40$

14. Factor $x^2 + 4x + 3$

15. Factor $x^2 + 8x - 9$

Name: _____

p1105: Factoring when $a = 1$ (v2)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 + 2x - 48$

2. Factor $x^2 + 5x + 6$

3. Factor $x^2 + 14x + 49$

4. Factor $x^2 + 4x - 21$

5. Factor $x^2 - 10x + 21$

6. Factor $x^2 + 7x - 8$

7. Factor $x^2 + 4x - 12$

8. Factor $x^2 + 2x - 8$

9. Factor $x^2 + 9x + 8$

10. Factor $x^2 + 9x + 20$

11. Factor $x^2 - 8x - 9$

12. Factor $x^2 + 6x - 7$

13. Factor $x^2 - 6x + 5$

14. Factor $x^2 + 9x + 18$

15. Factor $x^2 - 2x - 63$

Name: _____

p1105: Factoring when $a = 1$ (v3)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 + x - 56$

2. Factor $x^2 + 16x + 64$

3. Factor $x^2 + 17x + 72$

4. Factor $x^2 - 3x - 54$

5. Factor $x^2 + 10x + 21$

6. Factor $x^2 + 7x + 12$

7. Factor $x^2 - 1$

8. Factor $x^2 + 5x + 4$

9. Factor $x^2 - 13x + 42$

10. Factor $x^2 - 14x + 45$

11. Factor $x^2 - 7x + 12$

12. Factor $x^2 - 9x + 14$

13. Factor $x^2 + 6x - 7$

14. Factor $x^2 + 4x - 5$

15. Factor $x^2 - 6x + 9$

Name: _____

p1105: Factoring when $a = 1$ (v4)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 - 10x + 21$

2. Factor $x^2 - 10x + 16$

3. Factor $x^2 - 10x + 25$

4. Factor $x^2 + 10x + 24$

5. Factor $x^2 + 13x + 36$

6. Factor $x^2 + 4x - 12$

7. Factor $x^2 + 3x - 4$

8. Factor $x^2 - 9x + 20$

9. Factor $x^2 - 5x + 4$

10. Factor $x^2 - 2x - 35$

11. Factor $x^2 + 6x - 7$

12. Factor $x^2 - 12x + 32$

13. Factor $x^2 - 9x + 18$

14. Factor $x^2 + 9x + 20$

15. Factor $x^2 - 2x - 3$

Name: _____

p1105: Factoring when $a = 1$ (v5)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 - 81$

2. Factor $x^2 - 2x - 15$

3. Factor $x^2 + 9x + 18$

4. Factor $x^2 + 15x + 54$

5. Factor $x^2 - 4x - 32$

6. Factor $x^2 + 13x + 40$

7. Factor $x^2 - 1$

8. Factor $x^2 - 2x - 8$

9. Factor $x^2 - 11x + 18$

10. Factor $x^2 - 2x + 1$

11. Factor $x^2 - 2x - 48$

12. Factor $x^2 - 8x - 9$

13. Factor $x^2 - 8x + 15$

14. Factor $x^2 + 12x + 27$

15. Factor $x^2 + 3x - 40$

Name: _____

p1105: Factoring when $a = 1$ (v6)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 + 11x + 24$

2. Factor $x^2 - 5x - 24$

3. Factor $x^2 - 4$

4. Factor $x^2 - 5x + 6$

5. Factor $x^2 + 5x + 6$

6. Factor $x^2 + x - 56$

7. Factor $x^2 - x - 12$

8. Factor $x^2 + 8x - 9$

9. Factor $x^2 - x - 42$

10. Factor $x^2 - 4x - 32$

11. Factor $x^2 - 16$

12. Factor $x^2 - x - 72$

13. Factor $x^2 + 5x - 24$

14. Factor $x^2 - 8x + 15$

15. Factor $x^2 - 12x + 36$

Name: _____

p1105: Factoring when $a = 1$ (v7)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 + 13x + 42$

2. Factor $x^2 + 3x - 18$

3. Factor $x^2 + 2x - 24$

4. Factor $x^2 - 4x - 32$

5. Factor $x^2 - 4x - 45$

6. Factor $x^2 + 14x + 45$

7. Factor $x^2 - 3x - 10$

8. Factor $x^2 + 9x + 14$

9. Factor $x^2 + 16x + 63$

10. Factor $x^2 - 8x + 7$

11. Factor $x^2 - x - 72$

12. Factor $x^2 + 14x + 48$

13. Factor $x^2 + 3x - 10$

14. Factor $x^2 + 6x - 16$

15. Factor $x^2 - 8x + 12$

Name: _____

p1105: Factoring when $a = 1$ (v8)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 - 14x + 49$

2. Factor $x^2 + 9x + 18$

3. Factor $x^2 - 2x - 63$

4. Factor $x^2 + 8x + 12$

5. Factor $x^2 + 14x + 48$

6. Factor $x^2 + 5x - 36$

7. Factor $x^2 - 6x - 7$

8. Factor $x^2 + x - 6$

9. Factor $x^2 + 2x - 24$

10. Factor $x^2 - 4x + 4$

11. Factor $x^2 + 15x + 54$

12. Factor $x^2 + 4x + 3$

13. Factor $x^2 + 3x - 54$

14. Factor $x^2 + x - 42$

15. Factor $x^2 + 3x - 18$

Name: _____

p1105: Factoring when $a = 1$ (v9)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 + 3x - 18$

2. Factor $x^2 + 5x + 6$

3. Factor $x^2 + 5x - 6$

4. Factor $x^2 - 8x + 15$

5. Factor $x^2 - 2x - 3$

6. Factor $x^2 - 15x + 56$

7. Factor $x^2 - 16x + 63$

8. Factor $x^2 - x - 12$

9. Factor $x^2 - 5x - 14$

10. Factor $x^2 + 16x + 63$

11. Factor $x^2 + 4x - 21$

12. Factor $x^2 - 6x - 27$

13. Factor $x^2 + 3x - 4$

14. Factor $x^2 - 3x + 2$

15. Factor $x^2 - x - 42$

Name: _____

p1105: Factoring when $a = 1$ (v10)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 - x - 42$

2. Factor $x^2 - 10x + 16$

3. Factor $x^2 + 11x + 18$

4. Factor $x^2 - 3x + 2$

5. Factor $x^2 + 2x - 48$

6. Factor $x^2 + 10x + 9$

7. Factor $x^2 - 9x + 8$

8. Factor $x^2 - 8x + 15$

9. Factor $x^2 + 6x - 27$

10. Factor $x^2 - 4x - 45$

11. Factor $x^2 + 4x + 3$

12. Factor $x^2 - 81$

13. Factor $x^2 - 2x - 3$

14. Factor $x^2 - 3x - 40$

15. Factor $x^2 - 13x + 36$

Name: _____

p1105: Factoring when $a = 1$ (v11)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 + 9x + 8$

2. Factor $x^2 - 11x + 30$

3. Factor $x^2 - 6x - 7$

4. Factor $x^2 - 4$

5. Factor $x^2 - 15x + 56$

6. Factor $x^2 + 6x + 5$

7. Factor $x^2 - x - 30$

8. Factor $x^2 + x - 12$

9. Factor $x^2 - 7x - 8$

10. Factor $x^2 + 2x - 15$

11. Factor $x^2 + 5x - 14$

12. Factor $x^2 - x - 56$

13. Factor $x^2 - 3x - 28$

14. Factor $x^2 + 5x + 4$

15. Factor $x^2 - 9x + 14$

Name: _____

p1105: Factoring when $a = 1$ (v12)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 + 2x - 35$

2. Factor $x^2 - 4x - 12$

3. Factor $x^2 - 13x + 36$

4. Factor $x^2 + 7x + 10$

5. Factor $x^2 - 16$

6. Factor $x^2 - 14x + 49$

7. Factor $x^2 - x - 72$

8. Factor $x^2 + 10x + 16$

9. Factor $x^2 + 2x - 15$

10. Factor $x^2 - x - 30$

11. Factor $x^2 + 13x + 42$

12. Factor $x^2 - 16x + 63$

13. Factor $x^2 - 2x - 35$

14. Factor $x^2 + 8x + 15$

15. Factor $x^2 - 17x + 72$